

# CLAIMS

1. A spark plug for an internal combustion engine characterized in that the spark plug comprises a center electrode comprising a basic body and a tip for the center electrode joined to said basic body and a ground electrode comprising a base, an interlayer formed at a predetermined position of said base, and a tip for the ground electrode joined to a surface of said interlayer, wherein said tip for the center electrode and said tip for the ground electrode are disposed to face each other, said tip for the center electrode and said tip for the ground electrode are each made of Ir or made of an alloy chiefly composed of Ir, a thermal expansion coefficient of said interlayer is between a thermal expansion coefficient of said base and a thermal expansion coefficient of said tip for the ground electrode, said basic body and said tip for the center electrode are joined to each other according to laser welding, and said interlayer and said tip for the ground electrode are joined to each other according to electric resistance welding.
2. The spark plug for an internal combustion according to Claim 1, wherein said tip for the center electrode and said tip for the ground electrode are each made of an alloy chiefly composed of Ir that contains (1) Rh of 1.5 to 50 mass %, (2) Pt of 1 to 10 mass %, or Rh of 1.5 to 50 mass % and Pt or Ru of 1 to

10 mass %, and said interlayer is made of an alloy chiefly composed of Pt or Ir.

3. The spark plug for an internal combustion according to Claim 1, wherein a thermal expansion coefficient at 900°C of said interlayer is  $10 \times 10^{-6}/^{\circ}\text{C}$  to  $16 \times 10^{-6}/^{\circ}\text{C}$ .

4. The spark plug for an internal combustion according to Claim 1, wherein the whole surface of said interlayer is covered with said tip for the ground electrode.

5. The spark plug for an internal combustion according to any one of Claims 1 through 4, wherein a good thermal conduction core is disposed in an interior of said base of said ground electrode.